

### **Remarks**

Claims 1-28 and 31-34 were pending at the date of the Office Action on August 27, 2009. Applicants' appreciate the Examiner's most helpful comments and acknowledgements, as well as the withdrawal of the previous rejections under 35 U.S.C. §§ 112 and 101, and the rejection of claims 6, 8-9, 12 and 14-15 under §103(a) over Borgefors in view of Wang, *IEEE*, pages 1114-1121 (1992), in further view of Saha *et al.*, *Comput. Vision Image Understanding* 77:145-174 (2000). Although the Examiner has stated that claims 6, 8, 9, 12, 14 and 15 would be allowable if re-written in independent form, containing all elements of the underlying claims, Applicants believe that in light of the amendments, all presently pending claims are written to define allowable subject matter in this invention.

Since the Examiner has indicated that claim 6 would be allowable if re-written to include each limitation (express elements) in the underlying and intervening base claims, Applicants have amended claim 1 to include all of the elements of claims 2 and 5, plus the elements in claim 6. Support is found in the now cancelled claims. Similarly, claim 17 has been amended to include all of the elements of claims 18, 20 and 21.

The dependency of claims 3, 8, 9, and 14 is amended as shown.

Claims 2, 5-7, 12, 18, 20, 21, 26, 28 and 32 are hereby cancelled because the subject matter in each is combined into a presently pending claim. However, no admission is made by this cancellation regarding the patentability of that subject matter.

No new matter has been added.

### **Response to Examiner's Claim Rejections under 35 U.S.C. §§102 and 103**

In light of the amendment of claims 1 and 17, and therefore to all claims dependant thereon Applicants assert that the Examiner's rejections of this patent application are moot, and ask that they be withdrawn as to the remaining claims in light of the reasons of record.

Each §§102 and 103 rejection has as its primary base reference Borgefors *IEEE* (August 11, 2002) from the 16th International Conference on Pattern Recognition (ICPR'02) - Volume 1, *i.e.*, of claim 1 under §102(a) as anticipated by Borgefors; and of claims 2-5, 7, 10-11, 13 and 16 under §103(a) over Borgefors in view of Wang, *IEEE*, pages 1114-1121 (1992); and of claims 17 and 22-25 (adding claim 31) under 35 U.S.C. §103(a) as obvious over Borgefors in view of Lang *et al.* (US 2003/0112921). In addition, the Examiner has added a new rejection (issue 15) of

claims 18-21, 26-28 and 32-34 over Borgefors, as modified by Lang, in further view of Wang. Accordingly, in all of the cited prior art, the rejections have a basis in Borgefors, and the combined references cannot stand in combination without Borgefors.

However, as Applicants' record shows, Borgefors' publication *followed* Applicants' date of invention, and thus is not a proper prior art reference to Applicants' invention. But even if it were, and if it were combined with the remaining cited references, the combined teaching still fails to teach each and every step of Applicants' claimed invention, regardless of whether Applicants' claimed method is applied to biological/medical target objects or not.

Applicants attach hereto a Combined Declaration, in compliance with the Examiner's suggestion at page 3 of the Office Action, that it is "strongly suggested that Applicants file such a Declaration with regard to Applicants' statement that their date of invention precedes August 2002." The Combined Declaration, signed by all 3 inventors, describes the conception, reduction to practice, constructive reduction to practice or due diligence of Applicants' invention as described under MPEP 715.04. Supporting the Combined Declaration is Applicants' Preliminary Technology Disclosure Form submitting the invention to the Center for Technology Transfer at the University of Pennsylvania on July 25, 2002 (see attached Exhibit 1). Attached to that Disclosure Form was Applicants' manuscript, disclosing Applicants' invention in sufficient detail as to satisfy all 35 U.S.C. §112 requirements. This manuscript is cited as evidence that Applicant's invention was completed before July 25, 2002. By Applicants' sworn statement, the manuscript submitted with that Disclosure Form to the University on July 25, 2002 was the same manuscript as was filed in U.S. Provisional Patent Application 60/431,129, dated December 5, 2002.

Clearly, Applicants could not have disclosed their invention in patentable detail to the University on July 25, 2002, and as fully disclosed in the manuscript submitted for the Provisional filing, unless it had been completed prior to that date. As a result, the cited Borgefors' August 11, 2002 *IEEE* reference was not published until *after* Applicants' date of completed invention, meaning that the cited reference, alone or combined, *followed* Applicants' date of invention. Accordingly, Borgefors August 2002 *IEEE* reference is not a proper prior art reference against Applicant's invention.

Thus, the combined references, in reliance upon Borgefors (*IEEE*, Aug. 2002), impermissibly fail to render Applicants' claimed invention unpatentable. Accordingly,

Applicants respectfully ask that the prior art rejections be reconsidered and withdrawn, and that Applicants' claims be moved to allowance.

**Response to the Drawings Objection under 37 C.F.R. §1.83(a)**

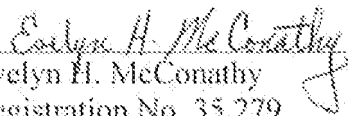
The Examiner has objected to Applicants' drawings submitted on 4/28/09 under 37 C.F.R. 1.83(a), stating that the Specification "requires reference numbers for each of the four flowchart boxes" albeit "only one section of the specification needs to be amended to incorporate such new reference numbers. Applicants have complied with this requirement, by resubmitting Figure 19 with the specified identifier of each box (10, 20, 30 and 40) added, and with the amendment of the Specification at paragraph [0038.1] with the same description of each box as provided in 10, 20, 30 and 40, rendering the Examiner's objection moot.

Accordingly Applicant's ask that the objection be removed and the matter moved to allowance.

In conclusion, Applicants assert that all pending claims are in condition for allowance, and Applicants earnestly solicit a Notice of Allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided. Please charge any additional fees due in connection with the filing of this response to Deposit Account No. 50-4764.

Respectfully submitted,

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Encl: Inventor's Declaration under 37 C.F.R. §1.131